



Lawrence Livermore National Laboratory
Supply Chain Management Department

January 06, 2014

Attention: Interested Offerors

Subject: CORAL Request for Proposal (RFP) Number B604142
Proposal Due February 18, 2014

The Department of Energy's (DOE) National Nuclear Security Administration (NNSA) and Office of Science (SC) are collaborating to acquire three advanced computing resources for delivery in 2017. This collaboration, known as CORAL, involves Argonne National Laboratory (ANL), Lawrence Livermore National Laboratory (LLNL), and Oak Ridge National Laboratory (ORNL), which are collectively referred to as the Laboratories herein.

The Laboratories intend to select the set of two responsive and responsible Offerors whose proposals contain the combination of price, performance features, diversity and supplier attributes that offer the best overall value to the Laboratories. The Laboratories seek diversity in the selected set of proposals for several reasons; however, the primary reason is that SC has a mission need for architectural diversity between systems at the two Leadership Computing Facility centers at ANL and ORNL. Further, in order to meet challenging system requirements, it will be necessary to accelerate key non-recurring engineering (NRE, also known as research & development) as part of this acquisition in order to accelerate technology, improve capabilities, improve application performance, and lower the total cost of ownership of the delivered systems.

Lawrence Livermore National Security, LLC (LLNS) is issuing the CORAL RFP on behalf of the Laboratories. The Laboratories envision NRE and machine build awards to two companies (Company Alpha, Company Gemini). Subject to annual appropriated funding from Congress: 1.) LLNS intends to award the two NRE subcontracts, one to Company Alpha and the other to Company Gemini; 2.) ANL intends to award a machine build subcontract to Company Alpha; 3.) ORNL intends to award a machine build subcontract to Company Gemini; 4.) LLNS intends to award a machine build subcontract to either Company Alpha or Company Gemini; and 5.) the Laboratories may award second machine build subcontracts (with machine purchase as a unilateral option) as a risk mitigation strategy or as an option to provide additional computing resources for a site. For example, under the scenario listed in 2.) above, one laboratory may award a second machine build subcontract to Company Gemini to mitigate risk in the event that a "no-go" decision is made for the build of the Company Alpha solution (for more information on the CORAL Go/No-Go decision process, please see Article 16 of the LLNL Sample Build Subcontract).

The proposal evaluation process will be performed jointly by the Laboratories. In addition, LLNS will seek assistance from Sandia National Laboratory (SNL) and Los Alamos Laboratory (LANL) in the proposal evaluation process.

The Laboratories intend to jointly negotiate the two NRE subcontracts and three build subcontract. The NRE subcontracts will be for research and development work needed to deliver the three systems. The NRE subcontracts will be issued by LLNL and will be overseen by technical representatives from LLNL, ORNL, and Argonne. The respective laboratories where the systems will be placed will issue the build subcontracts.

REQUEST

LLNS requests proposals for CORAL NRE, and CORAL machine build /delivery / installation / maintenance (machine build) in accordance with this RFP and the enclosed Sample Subcontracts. Proposals shall be valid for at least 180 days after the proposal due date.

This RFP letter and all of its associated documents may be downloaded from the following URL.

<https://asc.llnl.gov/CORAL/>

Acceptance of late proposals will be at the sole discretion of the Laboratories. The Laboratories reserve the right to: 1.) make selections on the basis of initial proposals; 2.) negotiate with any or all Offerors for any reason; 3.) award subcontracts to one or more Offerors; 4.) award subcontracts based on all or part of an Offeror's proposal, including any options contained in the proposal; 5.) reject any or all proposals; 6.) waive any minor irregularities in any proposal; and 7.) cancel this RFP at any time prior to award without cost to the Laboratories.

This RFP does not include provisions for the reimbursement of proposal preparation costs.

The LLNS Contract Administrator is Gary Ward and may be reached by telephone at (925) 423-5952 or by e-mail at ward31@llnl.gov.

LLNL is managed by LLNS and operates under LLNS procurement policies and procedures consistent with the Prime Contract between LLNS and the United States Government, represented by the DOE NNSA. ANL is managed by UChicago Argonne, LLC. ORNL is managed by UT-Battelle LLC.

Interested Offerors must send a contact name, phone number and email address to the LLNS Contract Administrator, via email (ward31@llnl.gov), no later than January 17, 2014, so that LLNS can notify Interested Offerors of any changes to the RFP. LLNS will not be responsible for notifying Offerors who do not register according to these instructions. Offerors are ultimately responsible for monitoring the website at <https://asc.llnl.gov/CORAL/> for all amendments to the RFP, questions and answers germane to the RFP, and updated information.

FUNDING

Funding to perform all of the work described in the Sample Subcontracts is not presently available. LLNS anticipates funding to become available in a manner that will allow the selected Offerors to perform continuously until completion.

The working budget range for *each* CORAL NRE subcontract is approximately \$25M. However, the actual award(s) amount may be more or less depending on the Laboratories' perceived value of the proposal(s), resulting negotiations, and annual appropriated funding from Congress.

The working budget range for *each* CORAL machine build subcontract is up to \$155M. However, the actual award amount may be less depending on the Laboratories' perceived value of the proposal(s), resulting negotiations, and annual appropriated funding from Congress. Exercise of any proposed options will depend on prices proposed by Offerors for the options, the value to the Laboratories of exercising the options, and annual appropriated funding from Congress.

Offerors are advised that ANL intends to acquire its machines using third party Lease-To-Own (LTO) financing. ORNL intends to acquire its machine by using the Draft Lease Agreement that is a part of this RFP. ORNL may choose to exercise the option for third party leasing contained in the Draft Lease Agreement. LLNS intends to acquire its machine using direct funding; however, LLNS reserves the right to use LTO financing for a portion of its machine depending on annual appropriated funding from Congress.

With respect to ANL, its LTO Sample and the Master Lease Agreement apply only if the successful Offeror can offer mutually acceptable financing options. In any case, the Laboratories will have the right to use third party financing.

LABORATORY TERMS AND CONDITIONS

This RFP includes terms and conditions from each of the three Laboratories. Each Laboratory will make award(s) using its own terms and conditions. Refer to the Enclosures section below for a list of Laboratory specific terms and conditions.

NAICS CODES AND SMALL BUSINESS SIZE STANDARD

NRE Awards

The North American Industry Classification System (NAICS) Code for the NRE awards is 541712, Research and Development in the Physical, Engineering, and Life Sciences (except Biotechnology). The corresponding small business size standard for this acquisition is 500 or fewer employees.

The Offeror shall base its Small Business Program Representations in the attached NRE Representations and Certifications form on this small business size standard. Refer to Subpart 19.1 - Size Standards of the Federal Acquisition Regulation (FAR) for information on calculating annual average gross revenue.

Machine Build Awards

The North American Industry Classification System (NAICS) Code for this acquisition is 334111, Electronic Computer Manufacturing. The corresponding small business size standard for the machine build awards is 1,000 or fewer employees.

The Offeror shall base its Small Business Program Representations in the attached machine build Representations and Certifications form on this small business size standard. Refer to Subpart 19.1 -

Size Standards, of the Federal Acquisition Regulation (FAR) for information on calculating number of employees.

PROPOSAL PREPARATION

Refer to Attachment 3, Proposal Evaluation and Proposal Preparation Instructions (PEPPI) for related information. This attachment contains detailed and specific instructions on what must be included in the proposals. It is extremely important to note that Attachment 2, the Draft CORAL Build Statement of Work (SOW), and Attachment 3 must be used together. Attachment 2 contains the technical requirements for CORAL supercomputers and Attachment 3 describes how an Offeror must respond to those technical requirements. In addition, Attachment 3 also includes how an Offeror must respond in its proposal to business and pricing requirements of this RFP.

Part 2 of Attachment 3 describes the overall format of the proposal. Part 3 describes how Offerors must respond to the CORAL build technical requirements of Attachment 2, the SOW. Part 4 addresses past performance information, open source experience, and company financial information. Part 5 describes how Offerors must respond in their CORAL NRE technical proposals. Part 6 describes how Offerors must respond with a CORAL NRE and build price proposal. Part 7 addresses miscellaneous information Offerors should submit in their proposals. Part 8 provides further details about company financial information. Part 9 addresses benchmark related information.

The terms Mandatory Requirement, Mandatory Option Requirement, Technical Option Requirement, and Target Requirement are used throughout Attachments 2 and 3. Section 1.2 of Attachment 3 provides definitions of these terms, and describes how an Offeror's response to each of these requirements will be evaluated as part of the best value source selection process. The SOW contains three Mandatory Requirements, located in Sections 3.1, 3.3, and 3.4 and four Mandatory Option Requirements, located in Sections 3.7.5, 11.1.4.1, 11.1.4.2, and 12.0. Technical Option Requirements and Target Requirements are identified throughout the SOW.

EVALUATION AND SELECTION

Personnel from each of the three Laboratories will make up the proposal evaluation team (PET). Personnel from LANL and SNL will assist in the process as needed.

Refer to Attachment 3, PEPPI, for related information. Part 1 describes in detail how the PET will evaluate proposals received in response to this RFP. Section 1.1 addresses evaluation factors and the basis for selection. Section 1.2 addresses requirement category definitions and describes how the PET will evaluate an Offeror's response to each of these requirements as part of the best value source selection process. Section 1.3 addresses evaluation of the technical proposals and performance features offered in each proposal(s). Section 1.4 describes how the PET will evaluate an Offeror's proposed delivery schedule. Section 1.5 relates to how the PET will assess the feasibility of the systems proposed by an Offeror. Section 1.6 describes how the PET will assess Offeror business proposals. Section 1.7 describes how the PET will evaluate price. Section 1.8 addresses the Laboratories' need for diversity, as judged by the Laboratories, in selecting the set of two best value proposals. Finally, Section 1.9 addresses options.

PRICING

Offerors are advised that pricing should only be identified and included in Proposal Volume 4. Offerors must not include pricing in any other proposal volumes. Refer to PEPPI Section 6 for related information.

PRICING FOR HARDWARE AND SOFTWARE MAINTENANCE

Offerors are advised that the Laboratories require pricing for five years of hardware and software maintenance priced on an annual basis, and included in Proposal Volume 4. Refer to PEPPI Section 6 for related information.

OFFEROR QUESTIONS

LLNS will respond to questions submitted in writing to the LLNS Contract Administrator on or before February 12, 2014. Questions will be submitted via email to ward31@llnl.gov. Answers to questions that are germane to the interpretation of CORAL requirements will be posted to the CORAL RFP web site for viewing by all potential Offerors. Answers to questions that are specific to the interpretation of CORAL requirements and are based on an Offeror's competitive bid strategy or proprietary information will only be provided to the Offeror who submitted the question(s). In all cases, LLNS will determine what Q&A will be posted to the CORAL RFP web site, and what Q&A will be provided only to the Offeror who submitted the question(s).

SUBMITTING PROPOSALS

Submission of a proposal(s) indicates the Offeror's willingness to accept the terms and conditions of the Sample Subcontracts and their attachments unless specific exceptions are taken. These terms and conditions have been approved by either the DOE/NNSA or the DOE Office of Science. Changing them will be time consuming. Failure to accept the terms and conditions may result in significant, unacceptable delays in award of the Subcontracts, which could cause the Laboratories to reject an Offeror's proposal.

Please submit one electronic copy of your proposal(s) on CD-ROM. Electronic copies of the complete proposal should be in Microsoft Office 2007 or later (Word, Excel, PowerPoint, Project and Visio), PDF format, or Rich Text Format. If the offeror is submitting more than one proposed solution it should submit a separate CD ROM for each proposed solution. Hardcopy proposals are not required. Submission of a proposal by electronic media will be considered by LLNS to be an Offeror's certification that the media are virus free.

It is important to note that Offerors should NOT plan to submit their proposal(s) via email. Firewall and other cybersecurity measures at LLNL may interfere with proposal submission via email. Offerors should plan to submit their proposals on CD-ROM.

Proposals are due to the LLNS Contract Administrator on February 18, 2014. Facsimile proposals are not acceptable.

Offerors shall deliver the proposal(s) to one of the following addresses.

Address for Commercial Courier

(Not For Hand Delivery)

Lawrence Livermore National Laboratory
Attention: Gary Ward
Mail Code L-557
RFP B604142
7000 East Avenue
Livermore, CA 94550

Address for Mailing

Lawrence Livermore National Laboratory
Attention: Gary Ward
Mail Code L-557
RFP B604142
P.O. Box 5012
Livermore, CA 94551

In addition, Offerors may hand carry and deliver its proposal to the LLNS Contract Administrator, who will be available between 1:00-2:00 PM PST on February 18, 2014, to receive proposals at the Discovery Center at the Lawrence Livermore National Laboratory. The Discovery Center is designated as Building 651 and is located on the east side of the LLNL off of Greenville Road. No special access credentials are required for admission to the Discovery Center.

INTELLECTUAL PROPERTY

It is anticipated that DOE will grant a class advance waiver on intellectual property for CORAL NRE. The grant of this class advance waiver is anticipated shortly. Upon receipt of the explicit language of the waiver, LLNS will amend this RFP to include the waiver. In general, the waiver will allow an awardee that is a large business, and any first tier subcontractor of that awardee, to assert copyright to its works of authorship and to elect title to its subject inventions without prior approval from the Government.

Cost sharing is a condition of the class advance waiver for a large business awardee. A large business must fund at least 40% of the total price of performance under its subcontract to have the class advance waiver language included in that subcontract. All Offerors shall include the total price of performance in their proposals and Offerors that are large businesses must make a specific assertion accepting the 40% share (or offering to share more than 40%) in order to obtain the terms of the class advance waiver. Offerors that are large businesses, that do not accept the 40% share, and that may be selected for award will be subject to the existing FAR and DEAR intellectual property clauses in the terms and conditions incorporated in the Sample Subcontracts.

A large business Offeror that desires a lower cost share percentage or different terms than those granted in the class advance waiver would be required to negotiate directly with DOE. However, those negotiations would be time consuming and would not allow the Laboratories to maintain the CORAL award schedule. As a result, the PET may view the Offeror's proposal less favorably than a proposal from another Offeror that is willing to cost share at least 40% and accept the class advance waiver provisions as is.

Offerors that are small businesses or non-profit entities and that may be selected for award should note that the class advance waiver provisions for patents will not be included in a subcontract. By statute, a small business may elect title to its subject invention without prior approval from the Government.

Foreign owned or controlled Offerors and proposed foreign owned or controlled subcontractors to an Offeror at any tier are not eligible to receive the class advance waiver provisions. These entities will be subject to the existing FAR and DEAR intellectual property clauses in the terms and conditions incorporated in the Sample Subcontracts.

FACILITY CLEARANCE AND FOREIGN OWNERSHIP, CONTROL OR INFLUENCE (FOCI) DETERMINATION

This applies to LLNL subcontracts. The resulting subcontracts may involve access to classified information and/or special nuclear material, or unescorted access to “Limited” or “Exclusion” security areas which will require access authorization. Therefore, (1) the successful Offeror must possess a DOE or Department of Defense (DOD) Facility Clearance which is based on a favorable FOCI determination, and (2) successful Offeror personnel must possess a DOE Access Authorization (clearance) appropriate for the access level.

The successful Offeror will not be granted access authorization until a signed Contract Security Classification Specification (CSCS) Form (DOE F 470.1) is received by LLNS. Therefore, LLNS expects the Offeror to have or be able to obtain a DOE or DOD Facility Clearance that is based on a positive FOCI determination. The Offeror’s proposal shall indicate whether it currently has a Facility Clearance. If the Offeror does not have or is unable to obtain a Facility Clearance, the Offeror, at LLNS’ discretion, may be ineligible for an award or, if selected for an award, will be required to perform on a restricted basis until a Facility Clearance is granted. If required to perform on a restricted basis, the Offeror would not be permitted access to classified information or special nuclear material, or unescorted access to certain security areas of the LLNL.

To apply for and obtain a FOCI Determination and a Facility Clearance, the Offeror must complete and submit certain electronic FOCI forms and related information, available on the DOE FOCI Electronic Submission Site Home at: <https://foci.anl.gov/>, which contains additional information.

WORKPLACE SUBSTANCE ABUSE PROGRAM PLAN

This applies to LLNL subcontracts. The resulting subcontracts will include DEAR clause 970.5223-4, *Workplace Substance Abuse Programs at DOE Sites*, requiring the Subcontractor to develop, implement, and maintain a workplace substance abuse program consistent with Part 707 of Title 10 of the Code of Federal Regulations (10 CFR 707). The selected Offeror will be required to include the requirements of 10 CFR 707 in any lower-tier subcontract with a value of \$25,000 or more that is determined to involve access to or handling of classified information or special nuclear materials; high risk of danger to life, the environment, public health and safety, or national security; or transportation of hazardous materials to or from a DOE/NNSA site.

Before the work can begin, the Offeror selected for award must submit a written Workplace Substance Abuse Program Plan (WSAPP) or WSAPP Certification consistent with 10 CFR 707 for LLNS approval. Upon execution of the Subcontract and submittal and approval of the Subcontractor’s WSAPP, LLNS will issue a bilateral modification to incorporate the LLNS approved WSAPP. Any lower-tier subcontractor’s WSAPP must be approved before the lower-tier subcontractor is allowed to perform the work.

After the WSAPP is approved by LLNS, its implementation will be subject to LLNS monitoring for compliance and effective implementation.

The Subcontract involves employees working in testing designated positions (TDPs) and such employees will be subject to applicant, random, reasonable suspicion, and occurrence drug testing.

PROPRIETARY INFORMATION

The Laboratories and DOE will treat all commercial, financial or technical information that is properly marked in a proposal in response to this RFP as proprietary information. Proper marking requires that each page containing commercial, financial or technical information be marked "Proprietary" or its equivalent. The Laboratories and DOE assume no liability for disclosure or use of unmarked data, and may use or disclose such data for any purpose. Unless restricted, information submitted in response to this RFP and subsequently used for procurement purposes may become subject to public disclosure pursuant to the provisions of the "Freedom of Information Act."

The PET will use their best efforts to (1) maintain such proprietary information in confidence, giving it the same degree of care, but no less than a reasonable degree of care, as the PET exercise with their own proprietary information to prevent its unauthorized disclosure; and (2) only disclose such proprietary information to their employees, agents, consultants or subcontractors on a "need to know" basis.

Offerors are advised that the Laboratories intend to disclose proprietary information to personnel at LANL and SNL. Proprietary information provided to the Laboratories may be discussed in any combination between the Laboratories, DOE, LANL, and SNL.

In addition to the above, the Offeror agrees that from time to time, consistent with the terms of the Laboratories' prime contracts with the U.S. Government, the Laboratories may release proprietary information to Government personnel who administer those prime contracts. Government personnel in receipt of proprietary information are subject to confidentiality requirements pursuant to 18 U.S.C. §1905.

SAFETY-RELATED REQUIREMENTS

This applies to the LLNL machine build award, and not to the NRE awards. Based on LLNS' determination of the hazards associated with the on-site work at LLNL, the Subcontractor may not be allowed to commence any work subject to a Job Hazard Analysis (JHA) or Site-Specific Safety Plan until the LLNS Contract Administrator and Subcontractor execute a bilateral modification incorporating the safety submittals into the Subcontract and authorizing release of the work. The LLNS Contract Administrator will not issue the modification until the Subcontractor has submitted, and LLNS has accepted, the safety submittals identified in the Subcontract. See the Sample Subcontract ENVIRONMENT, SAFETY, AND HEALTH PROVISIONS Incorporated Document, Section 4, Subcontractor ES&H Submittal Requirements, for details on required submittals.

Subcontractor personnel working on-site may be required to complete safety or other training specific to the LLNL facility or worksite where the work will be performed. The required training courses will be specified in the Subcontract documents. Subcontractor costs for the training are

reimbursable under the Subcontract to the extent that the costs are identified in the Subcontractor's proposal and incorporated into the resulting Subcontract by LLNS.

E-VERIFY PROGRAM ENROLLMENT VERIFICATION

This applies to the LLNL NRE awards, and not to the machine build awards. The Subcontract will include FAR clause 52.222-54, *EMPLOYMENT ELIGIBILITY VERIFICATION*. Accordingly, the selected Offeror will be required to:

1. Be enrolled as a *Federal Contractor* in the Government's on-line E-Verify System, which is located at: <https://e-verify.uscis.gov/enroll>, and provide the LLNS Contract Administrator with written verification of the enrollment;
2. Use the E-Verify System to verify the employment eligibility of employees as required by the clause; and
3. Include the clause in lower-tier subcontracts for Services or Construction in accordance with paragraph (e) of the clause and ensure such lower-tier subcontractors enroll as a *Federal Contractor* in the E-Verify System.

Additional information about employment eligibility verification requirements is available at: <http://www.dhs.gov/E-Verify>.

SUSTAINABLE ACQUISITION

The successful Offeror shall comply with all environmentally preferable purchasing provisions and reporting requirements.

ADVISORY

This is a procurement for high performance computing (HPC) equipment and related service. All potential offerors should know that the HPC community is relatively small - limited number of suppliers and buyers. Therefore, potential offerors should be aware that there could be existing relationships among the potential offerors and National Laboratory sponsors. Despite these relationships, the PET is committed to evaluate proposals based solely on the factors and sub-factors contained in the solicitation - emphasizing that existing mutual non-disclosure agreements will be honored; emphasizing that there will be no favoritism; and emphasizing that one offeror's technical solution will not be revealed to another offeror.

ENCLOSURES

The documents and forms identified below are available at the CORAL RFP website:

<https://asc.llnl.gov/CORAL/>

The following documents are hereby incorporated as part of this RFP *and need not be returned with the proposal*:

LLNL Documents

- Sample NRE Subcontract and its Incorporated Documents
- Sample Build Subcontract and its Incorporated Documents
- Insurance Instructions (*applies to the machine build award*)
- Cost Accounting Standards Notices and Certification (*may apply to the NRE award*)
- FAR Table 15-2 (*may apply to the NRE award*)
- Certificate of Current Cost or Pricing Data (*may apply to the NRE award*)

The following document is included for information. Only the successful Offeror(s) will be required to execute and return this LLNL document:

- Workplace Substance Abuse Program Plan (WSAPP) Certification (With TDPs) (Type 3)

ANL Documents

- Sample Purchase Order
- Appendix A, Argonne Terms and Conditions
- Moderate Risk Work By Contractors On the Argonne Site Supplement Conditions
- Sample Lease-To-Ownership Order
- Master Lease-To-Ownership Agreement

ORNL Documents

- Draft Lease Agreement
- General Terms & Conditions, Commercial Items
- Technical Data (Exhibit 9)
- Technical Direction

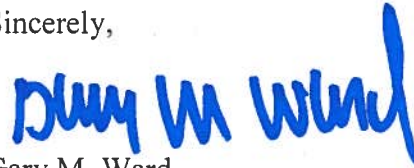
The Offeror shall complete the following documents *and submit them with the proposal*:

- LLNL NRE Representations & Certifications
- LLNL Build Representations & Certifications
- LLNL Model Small Business Subcontracting Plan (*applies to the LLNL NRE awards*)
- ORNL Representations & Certifications (UT-B Contracts Div)
- ORNL EEO Pre-Award Clearance Request
- ORNL Representation of Limited Rights Data and Restricted Computer Software

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- ANL Pre-Award Information (ANL Representations & Certifications)
- CORAL_Price_Schedule spreadsheet
- CORAL_Summary_Matrices spreadsheet
- CORAL_Benchmark_Results spreadsheet
- Any other documents mentioned in the PEPPI.

Sincerely,



Gary M. Ward
LLNS Contract Administrator

Enclosures: As Noted